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Quantum Gravity and String Theory

Understanding Confirmed Predictions in Quantum Gravity

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Feynman's relativistic path integral replaces the non-relativistic 1st quantization indeterminancy principle (required when using a classical Coulomb field in quantum mechanics) with a simple physical mechanism, multipath interference between small mechanical interactions. Each mechanical interaction is represented by a Feynman Moller scattering diagram (Fig. 1) for a gauge boson emitted by one charge to strike an effective interaction cross-section of the other charge, a cross-sectionl that is proportional to the square of the interaction strength or running coupling. Each additional pair of vertices in a Feynman diagram reduce its relative contribution to the path integral by a factor of the coupling, so for a force with a very small couplings like observable (low energy) quantum gravity, only the 2-vertex Feynman diagram has an appreciable contribution, allowing a very simple calculation to check the observable (low energy) quantum gravity interaction strength. Evidence is given that quantum gravity arises from a repulsive U(1) gauge symmetry which also causes the cosmological acceleration.

Comments: 7 Pages. Reference hyperlinks corrected.

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[v1] 2013-02-01 12:58:06
[v2] 2013-02-20 15:43:19

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RECENT COMMENTS BY GERARD 'T HOOFT ON PEER REVIEWS OF THIS PAPER:

http://vixra.org/abs/1111.0111 was submitted (Foundations of Physics submission FOOP2945) to Gerard 't Hooft, Chief Editor of "Foundations of Physics", who emailed on January 11, 2012: "Both the structure and the unduly high degree of speculativeness of the arguments presented in this manuscript place it outside the scope of Foundations of Physics." This is precisely the opposite of the confirmed predictions based on facts which are given in the paper, and are precisely what the paper itself says about mainstream "string theory" trash hype, which contains no checkable predictions and is poorly structured with a landscape of 10^500 metastable vacua. However, to remove all excuses, a briefer version cut from 63 pages to 7 pages and now hosted at http://vixra.org/abs/1302.0004 with the detailed literature survey including 43 references completely removed was prepared in order to focus concisely on the key prediction and its confirmed, factual basis (Foundations of Physics submission FOOP-D-13-00076). Gerard 't Hooft has emailed on 28 February 2013 by reversing his original 2012 criteria: "The author of this manuscript fails to make clear how his work relates to current discussions in the foundations of physics. Regrettably, this fact places the current submission outside the scope of Foundations of Physics. This is displayed by a lack of references to recent literature."

This contradicts the original submission, which DID have a recent literature survey of 43 references (http://vixra.org/abs/1111.0111) and a very detailed discussion of how the new result overthrows "current discussions in the foundations of physics." These 43 references were removed in the resubmission to force the peer reviewers to focus on the accuracy of the scientific calculations and their factual, defensible basis. First the man claimed that the discussion of the problems in existing research and the literature survey of 43 references had distracted him from seeing the factual basis of the confirmed predictions, and then when the references and literature discussions were removed, he reversed his argument and simply ignored the facts presented in the paper by complaining instead that the 43 references and literature discussion were now missing from the paper! This contradiction is due to contriving inconsistent and trivial reasons for ignoring the hard science in both papers.

However, we'll improve the paper in an effort to reach a compromise and see what happens. Notice that the